

Selected Benchmark Soil Datasets to Test the Validity of Algorithms and Existing Soil Properties in NASIS

| Standard Lab Test Dataset, Sorted by Soil Order | | |
|--|---------------|-------|
| Classification | Series Name | State |
| CLAYEY-SKELETAL, MAGNESIC, MESIC MOLLIC HAPLOXERALFS | DUBAKELLA | CA |
| CLAYEY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC PALEUDALFS | GOSS | MO |
| COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, SUPERACTIVE, FRIGID HAPLIC GLOSSUDALFS | ANTIGO | WI |
| FINE, ILLITIC, MESIC MOLLIC EPIAQUALFS | HOYTVILLE | OH |
| FINE, MIXED, ACTIVE, THERMIC ABRUPTIC DURIXERALFS | SAN JOAQUIN | CA |
| FINE, SMECTITIC, FRIGID LEPTIC TORRERTIC NATRUSTALFS | ABSHER | MT |
| FINE, SMECTITIC, MESIC AERIC CHROMIC VERTIC EPIAQUALFS | BLUFORD | IL |
| FINE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC HAPLUDALFS | MIAMI | IN |
| FINE-SILTY, MIXED, ACTIVE, MESIC TYPIC PALEUDALFS | CRIDER | KY |
| FINE-SILTY, MIXED, ACTIVE, THERMIC ALBIC GLOSSIC NATRAQUALFS | FOLEY | AR |
| FINE-SILTY, MIXED, ACTIVE, THERMIC GLOSSIC FRAGIUDALFS | GRENADA | MS |
| LOAMY, MIXED, SUPERACTIVE, THERMIC ARENIC ARIDIC PALEUSTALFS | BROWNFIELD | TX |
| ASHY OVER SANDY OR SANDY-SKELETAL, MIXED, FRIGID TYPIC VITRIXERANDS | BONNER | ID |
| ASHY-PUMICEOUS, GLASSY XERIC VITRICRYANDS | LAPINE | OR |
| MEDIAL, AMORPHIC, MESIC AQUIC VITRIXERANDS | TOKUL | WA |
| FINE, SMECTITIC, MESIC USTIC NATRARGIDS | ARVADA | WY |
| FINE-LOAMY, GYPsic, THERMIC USTIC CALCIGYPSIDS | REEVES | NM |
| FINE-SILTY, MIXED, MESIC TYPIC SALORTHIDS | SALT AIR | UT |
| LOAMY, MIXED, SUPERACTIVE, THERMIC, SHALLOW TYPIC PETROCALCIDS | CAVE | AZ |
| LOAMY-SKELETAL, MIXED, MESIC XERIC HAPLOCALCIDS | HIKO PEAK | UT |
| LOAMY-SKELETAL, MIXED, SUPERACTIVE, HYPERTHERMIC TYPIC HAPLOCALCIDS | GUNSIGHT | AZ |
| COARSE-SILTY, MIXED, SUPERACTIVE, SUBGELIC TYPIC AQUORTHELS | TANANA | AK |
| COARSE-LOAMY, MIXED, SUPERACTIVE, CALCAREOUS, MESIC TYPIC TORRIORTHENTS | MAZUMA | NV |
| COARSE-SILTY, MIXED, ACTIVE, NONACID, MESIC TYPIC FLUVAQUENTS | LIMERICK | VT |
| FINE, MIXED, SUPERACTIVE, NONACID, THERMIC TYPIC SULFAQUENTS | BOHICKET | SC |
| MIXED, FRIGID ARGIC UDIPSAMMENTS | ZIMMERMAN | MN |
| MIXED, MESIC TYPIC USTIPSAMMENTS | VALENTINE | NE |
| DYSIC SPHAGNIC BOROFIBRISTS | SALAMATOF | AK |
| DYSIC LITHIC CRYOFOLISTS | MCGILVER Y | AK |
| EUIC, MESIC TYPIC HAPLOSAPRISTS | HOUGHTON | MI |
| COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS | PAXTON | CT |
| COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC FRAGIUDEPTS | MARDIN | NY |
| COARSE-SILTY, MIXED, MESIC TYPIC DYSTROCHREPTS | BRIDGEHAMPTON | RI |
| COARSE-SILTY, MIXED, SUPERACTIVE, THERMIC TYPIC HAPLUSTEPTS | WOODWARD | OK |
| LOAMY-SKELETAL, SILICEOUS, SUBACTIVE, MESIC TYPIC DYSTROCHREPTS | DEKALB | PA |
| THIXOTROPIC, ISOHYPERTHERMIC TYPIC HYDRANDEPTS | HILO | HI |
| FINE, SMECTITIC, MESIC TYPIC ARGIUSTOLLS | HARNEY | KS |
| FINE-LOAMY, MIXED, SUPERACTIVE, FRIGID CALCIC HAPLUDOLLS | BARNES | ND |
| FINE-LOAMY, MIXED, SUPERACTIVE, MESIC ARIDIC ARGIUSTOLLS | ASCALON | CO |
| FINE-SILTY, MIXED, MESIC TYPIC ARGIUDDLSS | TAMA | IA |
| LOAMY-SKELETAL OVER FRAGMENTAL, MIXED ENTIC HAPLOBOROLLS | BANDERA | NM |
| FINE, SESQUIC, ISOHYPERTHERMIC ANIONIC ACRUDOX | NIPE | PR |
| VERY-FINE, KAOLINITIC, ISOHYPERTHERMIC RHODIC EUTRUSTOX | MOLOKAI | HI |
| COARSE-LOAMY, ISOTIC, FRIGID OXYAQUIC HAPLORTHODS | MARLOW | NH |
| LOAMY, ISOTIC, FRIGID LITHIC HAPLORTHODS | LYMAN | MA |
| SANDY, SILICEOUS, THERMIC AERIC ALAQUODS | LEON | FL |
| SANDY-SKELETAL, MIXED, FRIGID TYPIC HAPLORTHODS | HERMON | ME |
| COARSE-LOAMY, SILICEOUS, SEMIACTIVE, MESIC TYPIC HAPLUDULTS | DOWNER | NJ |
| FINE, KAOLINITIC, THERMIC TYPIC KANHAPLUDULTS | CECIL | NC |
| FINE, KAOLINITIC, THERMIC TYPIC RHODUDULTS | HIWASSEE | VA |
| FINE-LOAMY, KAOLINITIC, THERMIC PLINTHIC KANDIUDDLTS | DOTHAN | AL |
| FINE-LOAMY, MIXED, SUPERACTIVE, MESIC AQUIC FRAGIUDDLTS | ERNEST | WV |
| FINE-LOAMY, SILICEOUS, SEMIACTIVE, THERMIC HUMIC HAPLUDULTS | HUMPHREYS | TN |
| FINE-LOAMY, SILICEOUS, SEMIACTIVE, THERMIC TYPIC PALEAQUULTS | RAINS | SC |
| FINE-SILTY, MIXED, ACTIVE, MESIC TYPIC ENDOAQUULTS | OTHELLO | MD |
| LOAMY, SILICEOUS, SUBACTIVE, THERMIC ARENIC PALEAQUULTS | PELHAM | GA |
| FINE, SMECTITIC, THERMIC UDIC HAPLUSTERTS | HOUSTON BLACK | TX |
| VERY-FINE, SMECTITIC, MESIC TYPIC HAPLUSTERTS | PROMISE | SD |
| VERY-FINE, SMECTITIC, THERMIC CHROMIC EPIAQUERTS | SHARKEY | LA |

Test Dataset Team, National Soil Survey Center, Lincoln, Nebraska

Issue

Objective and Uses

Criteria Used to Develop the Dataset List

Completed Business

Remaining Business

Other Potential Applications

Some key soil properties of map unit components, which are used to generate soil interpretations in the National Soil Information System (NASIS), are not yet populated in the database. Many soil property values that exist in NASIS are *estimated values* that were not validated during the data conversion from the former State Soil Survey Database structure to the current NASIS data structure. In an effort to populate empty data fields and validate existing data, the National Soil Survey Center (NSSC) is developing algorithms from statistical analyses of National Soil Survey Laboratory data.

In order to improve the accuracy of our soil survey interpretations, *standard (control) test datasets* could be assembled and used to test the validity of NASIS data entries.

Identify criteria and assemble a *standard laboratory dataset* and a *standard component dataset*. The datasets will be representative of diverse soil taxa, but not so large as to make the validity-testing phase excessively time-consuming.

The standard laboratory dataset will be compared to the standard component dataset in order to test the validity of:

existing soil property values in NASIS and

soil property values derived from algorithms.

These datasets also will be used for validating soil survey interpretations.

SELECTED BENCHMARK SOIL DATASETS

DRAFT MAP FOR TEST DATASET TEAM, JUNE 2000

Please send any questions, comments, and suggestions to: testdataset@nssc.nrcs.usda.gov

Test Dataset Team Members

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USDA

NRCS

Natural Resources Conservation Service

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| Standard Lab Test Dataset, Sorted by State | | |
|--|---------------|--|
| State | Series Name | Classification |
| AK | MCGILVER Y | DYSIC LITHIC CRYOFOLISTS |
| AK | SALAMATOF | DYSIC SPHAGNIC BOROFIBRISTS |
| AK | TANANA | COARSE-SILTY, MIXED, SUPERACTIVE, SUBGELIC TYPIC AQUORTHELS |
| AL | DOTHAN | FINE-LOAMY, KAOLINITIC, THERMIC PLINTHIC KANDIUDDLTS |
| AR | FOLEY | FINE-SILTY, MIXED, ACTIVE, THERMIC ALBIC GLOSSIC NATRAQUALFS |
| AZ | CAVE | LOAMY, MIXED, SUPERACTIVE, THERMIC, SHALLOW TYPIC PETROCALCIDS |
| AZ | GUNSIGHT | LOAMY-SKELETAL, MIXED, SUPERACTIVE, HYPERTHERMIC TYPIC HAPLOCALCIDS |
| CA | DUBAKELLA | CLAYEY-SKELETAL, MAGNESIC, MESIC MOLLIC HAPLOXERALFS |
| CA | SAN JOAQUIN | FINE, MIXED, ACTIVE, THERMIC ABRUPTIC DURIXERALFS |
| CO | ASCALON | FINE-LOAMY, MIXED, SUPERACTIVE, MESIC ARIDIC ARGIUSTOLLS |
| CT | PAXTON | COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS |
| FL | LEON | SANDY, SILICEOUS, THERMIC AERIC ALAQUODS |
| GA | PELHAM | LOAMY, SILICEOUS, SUBACTIVE, THERMIC ARENIC PALEAQUULTS |
| HI | HILO | THIXOTROPIC, ISOHYPERTHERMIC TYPIC HYDRANDEPTS |
| HI | MOLOKAI | VERY-FINE, KAOLINITIC, ISOHYPERTHERMIC RHODIC EUTRUSTOX |
| IA | TAMA | FINE-SILTY, MIXED, MESIC TYPIC ARGIUDDLSS |
| ID | BONNER | ASHY OVER SANDY OR SANDY-SKELETAL, MIXED, FRIGID TYPIC VITRIXERANDS |
| IL | BLUFORD | FINE, SMECTITIC, MESIC AERIC CHROMIC VERTIC EPIAQUALFS |
| IN | MIAMI | FINE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC HAPLUDALFS |
| KS | HARNEY | FINE, SMECTITIC, MESIC TYPIC ARGIUSTOLLS |
| KY | CRIDER | FINE-SILTY, MIXED, ACTIVE, MESIC TYPIC PALEUDALFS |
| LA | SHARKEY | VERY-FINE, SMECTITIC, THERMIC CHROMIC EPIAQUERTS |
| MA | LYMAN | LOAMY, ISOTIC, FRIGID LITHIC HAPLORTHODS |
| MD | OTHELLO | FINE-SILTY, MIXED, ACTIVE, MESIC TYPIC ENDOAQUULTS |
| ME | HERMON | SANDY-SKELETAL, MIXED, FRIGID TYPIC HAPLORTHODS |
| MI | HOUGHTON | EUIC, MESIC TYPIC HAPLOSAPRISTS |
| MN | ZIMMERMAN | MIXED, FRIGID ARGIC UDIPSAMMENTS |
| MO | GOSS | CLAYEY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC PALEUDALFS |
| MS | GRENADA | FINE-SILTY, MIXED, ACTIVE, THERMIC GLOSSIC FRAGIUDALFS |
| MT | ABSHER | FINE, SMECTITIC, FRIGID LEPTIC TORRERTIC NATRUSTALFS |
| NC | CECIL | FINE, KAOLINITIC, THERMIC TYPIC KANHAPLUDULTS |
| ND | BARNES | FINE-LOAMY, MIXED, SUPERACTIVE, FRIGID CALCIC HAPLUDOLLS |
| NE | VALENTINE | MIXED, MESIC TYPIC USTIPSAMMENTS |
| NH | MARLOW | COARSE-LOAMY, ISOTIC, FRIGID OXYAQUIC HAPLORTHODS |
| NJ | DOWNER | COARSE-LOAMY, SILICEOUS, SEMIACTIVE, MESIC TYPIC HAPLUDULTS |
| NM | BANDERA | LOAMY-SKELETAL OVER FRAGMENTAL, MIXED ENTIC HAPLOBOROLLS |
| NM | REEVES | FINE-LOAMY, GYPsic, THERMIC USTIC CALCIGYPSIDS |
| NV | MAZUMA | COARSE-LOAMY, MIXED, SUPERACTIVE, CALCAREOUS, MESIC TYPIC TORRIORTHENTS |
| NY | MARDIN | COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC FRAGIUDEPTS |
| OH | HOYTVILLE | FINE, ILLITIC, MESIC MOLLIC EPIAQUALFS |
| OK | WOODWARD | COARSE-SILTY, MIXED, SUPERACTIVE, THERMIC TYPIC HAPLUSTEPTS |
| OR | LAPINE | ASHY-PUMICEOUS, GLASSY XERIC VITRICRYANDS |
| PA | DEKALB | LOAMY-SKELETAL, SILICEOUS, SUBACTIVE, MESIC TYPIC DYSTROCHREPTS |
| PR | NIPE | FINE, SESQUIC, ISOHYPERTHERMIC ANIONIC ACRUDOX |
| RI | BRIDGEHAMPTON | COARSE-SILTY, MIXED, MESIC TYPIC DYSTROCHREPTS |
| SC | BOHICKET | FINE, MIXED, SUPERACTIVE, NONACID, THERMIC TYPIC SULFAQUENTS |
| SC | RAINS | FINE-LOAMY, SILICEOUS, SEMIACTIVE, THERMIC TYPIC PALEAQUULTS |
| SD | PROMISE | VERY-FINE, SMECTITIC, MESIC TYPIC HAPLUSTERTS |
| TN | HUMPHREYS | FINE-LOAMY, SILICEOUS, SEMIACTIVE, THERMIC HUMIC HAPLUDULTS |
| TX | BROWNFIELD | LOAMY, MIXED, SUPERACTIVE, THERMIC ARENIC ARIDIC PALEUSTALFS |
| TX | HOUSTON BLACK | FINE, SMECTITIC, THERMIC UDIC HAPLUSTERTS |
| UT | HIKO PEAK | LOAMY-SKELETAL, MIXED, MESIC XERIC HAPLOCALCIDS |
| UT | SALT AIR | FINE-SILTY, MIXED, MESIC TYPIC SALORTHIDS |
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| VT | LIMERICK | COARSE-SILTY, MIXED, ACTIVE, NONACID, MESIC TYPIC FLUVAQUENTS |
| WA | TOKUL | MEDIAL, AMORPHIC, MESIC AQUIC VITRIXERANDS |
| WI | ANTIGO | COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, SUPERACTIVE, FRIGID HAPLIC GLOSSUDALFS |
| WV | ERNEST | FINE-LOAMY, MIXED, SUPERACTIVE, MESIC AQUIC FRAGIUDDLTS |
| WY | ARVADA | FINE, SMECTITIC, MESIC USTIC NATRARGIDS |